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*DB=USPT,PGPB; PLUR=YES; OP=ADJ***Hit Count Set Name**

result set

<u>L13</u>	15 and 112	6	<u>L13</u>
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<u>L10</u>	13 and 14	46739	<u>L10</u>
<u>L9</u>	17 and 18	33384	<u>L9</u>
<u>L8</u>	non\$1woven or un\$1woven	44556	<u>L8</u>
<u>L7</u>	fabric or textile	174706	<u>L7</u>
<u>L6</u>	durable same (non\$1woven or un\$1woven) same (fabric or textile)	476	<u>L6</u>
<u>L5</u>	precursor same web	855	<u>L5</u>
<u>L4</u>	nylon	137183	<u>L4</u>
<u>L3</u>	polyester	185289	<u>L3</u>
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Search Results - Record(s) 1 through 7 of 7 returned.☐ 1. Document ID: US 20010009832 A1

L2: Entry 1 of 7

File: PGPB

Jul 26, 2001

PGPUB-DOCUMENT-NUMBER: 20010009832
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20010009832 A1

TITLE: Flame resistant fabrics

PUBLICATION-DATE: July 26, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Shaffer, Donald E.	Wilmington	DE	US	
Ghorashi, Hamid M.	Midlothian	VA	US	

US-CL-CURRENT: 442/181; 442/203, 442/208, 442/209

ABSTRACT:

The present invention provides a woven flame resistant fabric comprising dissimilar warp and fill yarns, the warp yarns comprise staple or filament fibers and have a Limiting Oxygen Index of at least 27, and the fill yarns comprise natural fibers and wherein the ratio of warp to fill yarn ends in the fabric is at least 1.0.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KMMC	Draw Desc	Image
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☒ 2. Document ID: US 5876849 A

L2: Entry 2 of 7

File: USPT

Mar 2, 1999

US-PAT-NO: 5876849
DOCUMENT-IDENTIFIER: US 5876849 A

TITLE: Cotton/nylon fiber blends suitable for durable light shade fabrics containing carbon doped antistatic fibers

DATE-ISSUED: March 2, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Green; James	Bonita Springs	FL		

US-CL-CURRENT: 428/359; 428/362

ABSTRACT:

Cotton/nylon fiber blends have been discovered which are suitable for use in the warp yarns of durable fabrics dyed in light shades with permanent antistatic properties.

4 Claims, 0 Drawing figures
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments	Claims	KIMC	Draw Desc	Image
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☐ 3. Document ID: US 5759207 A

L2: Entry 3 of 7

File: USPT

Jun 2, 1998

US-PAT-NO: 5759207

DOCUMENT-IDENTIFIER: US 5759207 A

TITLE: Flat duck greige fabrics suitable for processing into flame resistant fabrics with low shrinkage

DATE-ISSUED: June 2, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Green; James R.	Bonita Springs	FL		

US-CL-CURRENT: 8/115.7; 427/393.3, 442/143, 442/189, 442/214, 442/215, 442/216,
442/301, 8/127.1, 8/139, 8/195, 8/490, 8/494

ABSTRACT:

Improved flat duck griegie cotton/thermoplastic fiber blend fabrics have been discovered which are suitable for processing into flame resistant fabrics with low laundry shrinkage while maintaining high resistance to molten metal.

15 Claims, 0 Drawing figures
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KIMC	Draw Desc	Image
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☒ 4. Document ID: US 5482763 A

L2: Entry 4 of 7

File: USPT

Jan 9, 1996

US-PAT-NO: 5482763

DOCUMENT-IDENTIFIER: US 5482763 A

TITLE: Light weight tear resistant fabric

DATE-ISSUED: January 9, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Shaffer; Donald E.	Wilmington	DE		

US-CL-CURRENT: 442/214; 139/420A, 139/420R, 139/426R, 442/220

ABSTRACT:

A light weight tear resistant fabric having a background fabric and reinforcing yarns selected such that the tensile strength of the reinforcing yarn is about two times that of the yarns of the background fabric and the elongation of the reinforcing yarns is at least two times that of the background fabric is described. The resulting reinforced fabric has at least 50% greater tear resistance than the background fabric as measured by the Elmendorf test.

10 Claims, 2 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☐ 5. Document ID: US 5447787 A

L2: Entry 5 of 7

File: USPT

Sep 5, 1995

US-PAT-NO: 5447787
DOCUMENT-IDENTIFIER: US 5447787 A

TITLE: Reinforced fabric

DATE-ISSUED: September 5, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Shaffer, Donald E.	Wilmington	DE		

US-CL-CURRENT: 442/2; 139/35, 139/410, 139/413, 139/414, 139/420A, 139/426R, 428/340,
428/902, 428/920, 442/205, 442/218 , 442/46

ABSTRACT:

A reinforced fabric composed of a background fabric and a reinforcing grid that is joined to the background fabric so that the grid reinforced fabric is at least 20% stronger than a fabric into which reinforcing yarns of the same type and weight percent as that of the grid have been integrally woven.

10 Claims, 3 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 3

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☐ 6. Document ID: US 5223334 A

L2: Entry 6 of 7

File: USPT

Jun 29, 1993

US-PAT-NO: 5223334
DOCUMENT-IDENTIFIER: US 5223334 A

TITLE: Electric arc resistant lightweight fabrics

DATE-ISSUED: June 29, 1993

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Green; James R.	Hockessin	DE		

US-CL-CURRENT: 442/214; 428/364, 428/373, 428/920

ABSTRACT:

Woven fabrics wherein the warp yarns contain specified amounts of heat resistant fibers blended with cotton fiber provide protection against radiation given off by electric arcs.

6 Claims, 0 Drawing figures
Exemplary Claim Number: 1

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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☒ 7. Document ID: US 4941884 A

L2: Entry 7 of 7

File: USPT

Jul 17, 1990

US-PAT-NO: 4941884DOCUMENT-IDENTIFIER: US 4941884 A

TITLE: Comfortable fabrics of high durability

DATE-ISSUED: July 17, 1990

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Green; James R.	Hockessin	DE		

US-CL-CURRENT: 8/120; 264/342RE, 264/80, 8/125

ABSTRACT:

Woven fabrics from blends of high and low modulus fibers provide comfort plus high durability to hard surface abrasion.

11 Claims, 4 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KWIC	Draw Desc	Image
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Term	Documents
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4941884S	0
"4941884".USPT,PGPB.	7
(4941884).USPT,PGPB.	7

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Search Results - Record(s) 1 through 6 of 6 returned.☒ 1. Document ID: US 20020007540 A1

L13: Entry 1 of 6

File: PGPB

Jan 24, 2002

PGPUB-DOCUMENT-NUMBER: 20020007540
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020007540 A1

TITLE: Imaged nonwoven fabrics

PUBLICATION-DATE: January 24, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Black, Samuel K.	Raleigh	NC	US	
Curtis, Charles Keith	Benson	NC	US	
Carlson, Cheryl L.	Willow Springs	NC	US	

US-CL-CURRENT: 28/105; 28/106

ABSTRACT:

A method of forming durable nonwoven fabrics by hydroentanglement includes providing a precursor web comprising a fibrous matrix of staple length fibers and/or substantially continuous filaments. The precursor web is subjected to hydroentanglement on a three-dimensional image transfer device to create a patterned and imaged fabric. Enhanced imaging is achieved by advancing the precursor web onto the movable imaging surface of the image transfer device at a rate substantially equal to the rate at which the image surface moves relative to one or more associated hydroentangling manifolds. Treatment with a polymeric binder composition enhances the integrity of the fabric, permitting it to exhibit desired physical characteristics, including strength, durability, softness, and drapeability. Mechanical compaction of the imaged and patterned fabric, such as by sanforizing, enhances the desired physical properties.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KMIC	Draw Desc	Image
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☒ 2. Document ID: US 20020002764 A1

L13: Entry 2 of 6

File: PGPB

Jan 10, 2002

PGPUB-DOCUMENT-NUMBER: 20020002764
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020002764 A1

TITLE: Durable and drapeable imaged nonwoven fabric

PUBLICATION-DATE: January 10, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Putnam, Michael J.	Fuquay-Varina	NC	US	
Hartgrove, Herbert P.	Angier	NC	US	
Rabon, Robert Gregory	Clayton	NC	US	

US-CL-CURRENT: 28/104; 442/327, 442/408

ABSTRACT:

A nonwoven fabric, and method of production, are disclosed, wherein the nonwoven fabric comprises textile length fibers with a portion being thermally fusible. The fabric exhibits sufficient durability to withstand commercial dyeing processes, with the resultant fabric finding widespread applicability by virtue of its durability and aesthetic appeal.

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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☒ 3. Document ID: US 6080482 A

L13: Entry 3 of 6

File: USPT

Jun 27, 2000

US-PAT-NO: 6080482

DOCUMENT-IDENTIFIER: US 6080482 A

TITLE: Undrawn, tough, durably melt-bondable, macodenier, thermoplastic, multicomponent filaments

DATE-ISSUED: June 27, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Martin; Philip G.	Forest Lake	MN		
Olson; Gary L.	Shoreview	MN		
Welygan; Dennis G.	Woodbury	MN		

US-CL-CURRENT: 428/373; 428/374, 442/361, 442/364

ABSTRACT:

Undrawn, tough, durably melt-bondable, macrodenier, thermoplastic, multicomponent filaments, such as sheath-core and side-by-side filaments, comprising a first plastic component and a second lower-melting component defining all or at least part of the material-air boundary of the filaments. The filaments can be made by melt-extruding thermoplastics to

form hot filaments, cooling and solidifying the hot filaments, and recovering the solidified filaments without any substantial tension being placed thereon. Aggregations of the filaments can be made in the form of floor matting and abrasive articles.

18 Claims, 30 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 5

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KMIC	Draw Desc	Image
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☒ 4. Document ID: US 5972463 A

L13: Entry 4 of 6

File: USPT

Oct 26, 1999

US-PAT-NO: 5972463

DOCUMENT-IDENTIFIER: US 5972463 A

TITLE: Undrawn, tough, durably melt-bondable, macrodenier, thermoplastic, multicomponent filaments

DATE-ISSUED: October 26, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Martin; Philip G.	Forest Lake	MN		
Olson; Gary L.	Shoreview	MN		
Welygan; Dennis G.	Woodbury	MN		

US-CL-CURRENT: 428/95; 428/373, 428/374, 428/96, 442/352, 442/362, 442/364, 442/48

ABSTRACT:

Undrawn, tough, durably melt-bondable, macrodenier, thermoplastic, multicomponent filaments, such as sheath-core and side-by-side filaments, comprising a first plastic component and a second lower-melting component defining all or at least part of the material-air boundary of the filaments. The filaments can be made by melt-extruding thermoplastics to form hot filaments, cooling and solidifying the hot filaments, and recovering the solidified filaments without any substantial tension being placed thereon. Aggregations of the filaments can be made in the form of floor matting and abrasive articles.

20 Claims, 30 Drawing figures

Exemplary Claim Number: 1

Number of Drawing Sheets: 5

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KMIC	Draw Desc	Image
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☐ 5. Document ID: US 5811186 A

L13: Entry 5 of 6

File: USPT

Sep 22, 1998

US-PAT-NO: 5811186

DOCUMENT-IDENTIFIER: US 5811186 A

TITLE: Undrawn, tough, durably melt-bonded, macrodenier, thermoplastic, multicomponent filaments

DATE-ISSUED: September 22, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Martin; Philip G.	Forest Lake	MN		
Olson; Gary L.	Shoreview	MN		
Welygan; Dennis G.	Woodbury	MN		

US-CL-CURRENT: 428/373; 428/374

ABSTRACT:

Undrawn, tough, durably melt-bondable, macrodenier, thermoplastic, multicomponent filaments, such as sheath-core and side-by-side filaments, comprising a first plastic component and a second lower-melting component defining all or at least part of the material-air boundary of the filaments. The filaments can be made by melt-extruding thermoplastics to form hot filaments, cooling and solidifying the hot filaments, and recovering the solidified filaments without any substantial tension being placed thereon. Aggregations of the filaments can be made in the form of floor matting and abrasive articles.

15 Claims, 30 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 5

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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KMC	Draw Desc	Image
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☐ 6. Document ID: US 5071681 A

L13: Entry 6 of 6

File: USPT

Dec 10, 1991

US-PAT-NO: 5071681
DOCUMENT-IDENTIFIER: US 5071681 A

TITLE: Water absorbent fiber web

DATE-ISSUED: December 10, 1991

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Manning; James H.	Appleton	WI		
Makoui; Kambiz B.	Menasha	WI		
Hollenberg; David H.	Neenah	WI		

US-CL-CURRENT: 427/392; 427/393, 442/118, 442/67, 604/374, 604/375

ABSTRACT:

A fibrous web having an enhanced capacity for water absorption is produced by impregnating an absorbent fabric with a polymer or copolymer capable of forming by cross-linking an absorbent polymer or copolymer and subsequently heating the treated fabric effecting cross-linking of the polymer to form an absorbent polymer. The product may comprise a non-woven fibrous web or mat having a water-insoluble binder on one surface and a cross-linked hydrophilic polymer or copolymer on its opposite surface.

12 Claims, 2 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 2

Full	Title	Citation	Front	Review	Classification	Date	Reference	Sequences	Attachments
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(L5 AND L12).USPT,PGPB.	6

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